City of Rockville

M E M O R A N D U M

June 10, 2005

TO: Twinbrook Neighborhood Plan Advisory Group (TNPAG)

FROM: Mayra Bayonet/Jim Wasilak, Long Range Planning

SUBJECT: TNPAG Meeting Thursday June 16, 2005 – Environmental Issues

The TNPAG meeting next week will focus on environmental questions.

The Strengths Weaknesses Opportunities Threats (SWOT) exercise conducted during the two community meetings held in November 2004 indicated that Twinbrook residents value their environment, including an appreciation of the number of trees within the neighborhood as well as access to recreational facilities and green space

However, several areas of concern were raised during the community meetings, were identified as issues to be addressed by the TNP, or have emerged in discussion since. These include:

- Tree maintenance
- Flooding and storm water management
- Trash in streams and parks

The Advisory Group used these issues to pose the following questions, which will be addressed at the June 16 meeting:

- Are stormwater management systems adequate? If not, how can they be improved?
- How can stream valley, parkland and open space maintenance be improved? (Also being looked at by the Parks and Rec. staff group)

City staff Lise Soukup (Department of Public Works), Nate Wall (Environmental Specialist), Susan Nolde (City Forester), and Rob Orndorff (City Horticulturalist), will be present to discuss these issues. Please use this time to ask questions about the programs and facilities and to learn as much as you can. This discussion should help you to not only understand the issues as they relate to the Twinbrook neighborhoods, but also help you to form ideas about what direction the

TNPAG should give on them as we move into the areas of land use and zoning, and as the Plan itself begins to take shape.

On the question of stormwater management, there are a number of recommendations that the Advisory Group might consider as part of the Twinbrook Neighborhood Plan:

- A long-term strategy is needed to address stormwater management issues that are identified, and a funding source may need to be created. Special Assessments could be levied, if all neighbors involved are prepared to participate. (It has proved difficult to arrive at consensus in other areas.) A report on the Burgundy Estates drainage issues is attached. This report outlines the issues for this particular neighborhood, but it serves as an example for areas that were built during that era, using similar land use and development patterns.
- A City-wide Stormwater Management (SWM) Fee study has been initiated and a consultant retained using operating budget funds. The City needs to develop a system of charges to all property owners to cover maintenance, repair and improvements to the City's SWM infrastructure. The City and an advisory group of business and resident owners will assess expected costs for the existing programs and possible program additions, such as Low Impact SWM measures and public education efforts. The Fee Study will also evaluate the cost of funding storm drain maintenance and improvements. To assist the City in prioritizing drainage problems, the TNPAG might compile a street list indicating frequent flooding or extensive drainage issues.
- We have limited information about the location of the storm drainage system in the Twinbrook neighborhoods. The Plan could recommend that the area be surveyed to locate and map the system. This would aid future management.
- Rock Creek Watershed Study: The Study was first adopted in 2000. A scheduled update in FY 2010 will provide information on the condition of Rock Creek and the effectiveness of SWM recommendations implemented via the original study and CIP. The Twinbrook Neighborhood Plan may recommend that a review of the updated Watershed Study be required, to determine its impact upon the neighborhoods, and to recommend future actions in light of its findings.

The following information is enclosed with this memo:

- Agenda for the TNPAG meeting on Thursday June 16, 2005, at 7:00 pm in the Dining Room at Glenview Mansion.
- Executive Summary of Rock Creek Watershed study. (City of Rockville, 2000)
- Burgundy Estates Drainage Issues – overview by DPW, 2004
- *Trees and Reliable Electric Service.* Pepco brochures giving answers to questions about tree pruning and electric power. In English and Spanish.
- Flow Chart on TNPAG process.
- Meeting Notes from the June 2, 2005 meeting.
- If you were unable to join us on June 2, 2005, you will also find a copies of the information handed out during the meeting.

The environmental issues below were raised during the TNPAG process, and will be handled in the following manner:

- *Are additional regulations regarding commercial lighting required?* - This topic likely will be considered as part of the City's Zoning Ordinance rewrite process to determine if additional regulations are desirable throughout the City. Specific areas in Twinbrook where this is a problem should be documented.
- *How can traffic and train noise be addressed?* We will discuss this topic as part of the Transportation Section. In advance of that discussion, please see the City of Rockville *Transportation Noise Study Interim Report*, dated January 19, 2005, available on-line at: http://www.rockvillemd.gov/residents/traffic/pdf/noise-study.pdf
- *Infrastructure capacity, including roads, sewer and water* will be touched upon at this meeting but covered more fully as part of the land use/infrastructure and transportation discussions.

The following related information is available online for reference:

"The Environment – Sensitive Areas and Critical Issues." Chapter Five. City of Rockville Comprehensive Master Plan. Approved and Adopted November 12, 2002. Pages 5-1 – 5-8.
http://www.rockvillemd.gov/masterplan/mp5-environment.ap.pdf

New City of Rockville *Storm Water Management and Sediment Control Laws and Regulations.*
http://www.rockvillemd.gov/residents/stormwater/index.html

Engineering and Environmental Projects in CIP Neighborhood 3 (Planning Area 8)
(Includes information about the Rockcrest Stream Restoration project)
http://www.rockvillemd.gov/cip/environment/nh3/nh3_overview.html

Capital Improvements Program: Engineering and Environment
http://www.rockvillemd.gov/cip/environment/index.html

The Lower Rock Creek Watershed Montgomery County Department of Environmental Protection.
http://www.montgomerycountymd.gov/deptmpl.asp?url=/content/dep/csps/Watersheds/csps/html/lrock.asp

City of Rockville *Master Street Tree Plan*
http://www.rockvillemd.gov/masterplan/treeplan/index.html

BURGUNDY ESTATES DRAINAGE PROBLEMS

Talking Points from presentation by DPW staff to Burgundy Estates HOA - 2004

Current Conditions

- 27 houses on the block between Baltimore/Denham/Edmonston/Woodburn. The houses closer to Baltimore Road do not report drainage problems since they are uphill. About 14 lots in the lower half of the block have flat yards with poor drainage, but 8 of these houses have access to the existing private storm drain system's yard inlets so they have fewer problems with overland flow.
- All land within lots is privately owned. There is no mandatory Homeowners Association – all owners manage their own property, and there are no common areas or public drainage easements.
- Three of the surrounding streets – Denham, Edmonston and Woodburn - have typical curb and gutter streets with storm drain inlets. The street runoff is contained within the streets by the curbs and the elevated driveway aprons at each house.
- Baltimore Road has a storm drain system with one inlet between Denham and Woodburn on the north side.
- Houses, back yards, patios and many of the driveways drain towards the back property line. This runoff cannot reach the streets by gravity flow.
- The back yards in the center of the block tend to be fairly flat, especially on the Denham Road side of the block. This causes overland flow to spread out horizontally across the yards, making the yards wet for prolonged periods.
- Numerous springs and seeps have been present within these lots since the original subdivision was built in 1956. The natural groundwater table is high in this area. This causes basement sump pumps to run a lot and also causes additional sogginess in low spots in the yards.
- Lot to lot drainage is problematic for residents. The original grading causes runoff to funnel along the common back yard property line, running downhill to the first yard inlet on lot 20.
- Additional imperviousness created by residents over the decades from patios, has increased surface runoff and decreased available open land that could absorb water.

Chronology

- 1956 - Original Subdivision plans were approved
- 1961 - surrounding streets (Denham, Edmonston, Woodburn) were built
- 1969 – residents petition DPW to deal with poor lot drainage and wet basement/yard problems. DPW did a drainage study and developed an engineering plan to extend the private storm drain. City Manager advises CA President that the requested storm drain improvements would cost an estimated $15,000 plus private lot regrading costs. All costs would be assessed to the eleven residents affected. Residents decide not to pursue improvements due to cost.
- 1976-77 – CA President again petitions City to address drainage. CA surveys all residents on block about extent of their drainage problems. DPW Director estimates that the previously proposed improvements would now cost $30-35,000 to construct, which

would be assessed to the owners. The City reiterates that the problems are caused by a high groundwater table, locating foundations on springheads without effective foundation drainage, and poor grading on the part of the original developer. These are not the City's responsibility to correct. Residents have meeting to discuss private drainage improvement plan from 1969

- 1981-82 – Residents again approached the City about drainage improvements. The Mayor and Council created an FY81 CIP project for this between the recommended CIP and adopted CIP. The Mayor and Council noted that this problem was not a City responsibility, but agreed to offer assistance to help residents rectify the problem. The improvements were to be funded 2/3 by City General Fund and 1/3 by resident Special Assessment. The previously proposed drainage improvements were now estimated to cost about $51,000, of which participating residents would pay $17,000. After numerous discussions with many of the residents, the project was dropped when only two residents would agree to the special assessment. Several residents refused to grant easements as well as refusing to pay their share. Aside from the lack of access caused by the easement denial, this made the private portion of the work too costly.
- The CIP project was dropped without completing design or being constructed. It did not appear in the next year's recommended or adopted CIPs.
- Over the years, DPW Maintenance crews have responded to resident complaints of clogged storm drain inlets, and removed sediment, debris or blockages from this private storm drain pipe. When DPW's maintenance crews are performing routine cleanouts of the public storm drain lines in Edmonston Road, this short section of private storm drain usually gets checked. However, this is not officially the City's responsibility.
- DPW Engineering has received 4 separate drainage complaints for this block between 1990 and 2004. Upon investigation, all complaints were found to be related to the original grading and subsurface groundwater conditions in this area. The City advised the residents about connecting sump pumps to the existing storm drain pipes in the streets and regrading their yards for better drainage.
- DPW Engineering began investigating the most recent wave of drainage complaints last July. Staff responded through the CSR (Customer Service Request) system and continued to advise residents about options.
- February 2004 -DPW Engineering and the Neighborhood Resources Coordinator attended a Burgundy Estates Civic Association meeting. Staff explained the history and options for drainage improvements to about 12 residents.
- March 2004 – residents raised their concerns with M&C, and are asking that City offer some relief or financial assistance. DPW continues to advocate that the City can only offer suggestions for private solutions, not design, construct or pay for drainage improvements of private lots. The same solutions that were identified by the City in 1969 are still viable and still the responsibility of the owners, not the City.

Possible Solutions

- Many engineering approaches to improving lot drainage – there may be others
- Vary in complexity, labor and cost

- Each has pros and cons
- Some combination of technical solutions is needed to address both groundwater and surface runoff problems – there's no one easy solution
- Groundwater problems will always be there. Drainage improvements just help move the groundwater away from basements/yards – they don't keep groundwater from collecting in the first place. Foundations, landscaping, and yard conditions may continue to have problems, no matter what improvements are installed.
- Burgundy Estates owners must decide which options are possible, based on willingness of affected lot owners to participate and their ability to pay for improvements. Individual owners DO have options to make improvements without cooperation from their neighbors.
- Owners need to hire their own contractors or do the work themselves for private lot improvements. City contractors will only work within the street right-of-way or established storm drain easement.
- Cost estimates are very rough, based on previous similar projects and standard unit costs used by City DPW. These may go up or (less likely) down, depending on extent of work.
- City does not provide cost assistance to homeowners for private lot improvements, except through the Community Development Block Grant (CDBG) funding program. This has specific low-income requirements. Landlords are not eligible for CGBG funding.

OPTIONS	***PROS***	***CONS***
Connect private sump pump drainage from basements/yards to existing public storm drain in streets **Cost - $10,000 per lot (based on Ashley Ave. lots)**	• *Can be done individually by lot; don't need cooperation of neighbors* • *Avoids placing an easement on property except for connection into street right of way* • *Outdoor sump can be installed to drain groundwater from yards*	• *Requires electric pumps* • *Pumps may run frequently* • *Pumps won't work during power outages* • *Outdoor sump grates frequently clog – owner must keep them clear* • *Costly – owners must obtain City permits and cut street paving to tie discharge pipe directly into storm drain*

OPTIONS	***PROS***	***CONS***
City rebuilds and extends storm drain in back yards; installs gravel bedding to improve groundwater drainage into existing inlets **Cost - $133,000**	• *Fairly successful at eliminating lot-to-lot drainage complaints* • *Will improve drainage of soggy yards caused by groundwater (won't eliminate groundwater problems completely)* • *Residents can tie their sump pumps into drainage system within their lots – less lot-to-lot drainage complaints* • *May drain yards by gravity – basements will probably still require electric sump pumps*	• *Costly – will require special assessment of affected residents,* • *Group participation is essential – too few owners participating will kill the project* • *Every affected owner must grant City/other residents a storm drainage easement*

Cost includes replacement of existing 12" pipe and extension with an 18" PVC storm drain along the back property line from 623 Denham Rd. to 607 Denham Rd. across 8 lots. Each lot on Denham and Woodburn Roads would have a stub-out pipe and gravel trench to connect to.

OPTIONS	***PROS***	***CONS***
Improve existing surface drainage system through back yards (from 615 to 605 Denham Rd.)– remove obstructions, dig out swale to promote gravity drainage, extend downspouts/sump pumps directly to swale for both Woodburn & Denham lots **Cost depends on work done**	• *Cheaper for owners* • *Less disturbance to private features (sheds, trees, fences)* • *If surface swale is improved with gravel bedding, groundwater may be better drained (also requires holes in receiving yard inlet's wall)*	• *All affected owners must agree and work together on improvements* • *Some private easements may be needed for Woodburn residents to tie into drainage system on Denham lots*

OPTIONS	***PROS***	***CONS***
Regrade private lots and import dirt to increase elevations of yards and promote flow to backyard drainage system **Do-It-Yourself costs:** **select fill dirt=$15/cubic yard + delivery fees**	• *Cheap, improves use of back yards* • *Can be done individually without cooperation of neighbors or easements* • *Reduces spread of surface runoff across large areas of back yard*	• *Mostly improves surface drainage, not groundwater drainage* • *Could worsen adjacent lots' drainage problems if they don't also regrade* • *Raising yard grades limited by basement elevations*

OPTIONS	***PROS***	***CONS***
Install gravel trenches through side and back yards to better drain groundwater away from houses – may also tie foundation drains, downspouts or sump pumps into these **Do-It-Yourself costs:** **¾" washed gravel=$25/CY + delivery fees**	• *Good for improving groundwater drainage, especially in compacted soils* • *Offers underground connections for house drainage*	• *Gravel trenches can clog up with sediment and quit working – need to wrap with filter cloth* • *Trenches need to 'daylight' somewhere for water to exit – need to connect to central swale or drainage pipe*